ABSTRACT OF THE DISCLOSURE

An apparatus and method for generating multiple scrambling codes in an asynchronous mobile communication system. In a scrambling code generating apparatus for generating a current scrambling code and a compressed mode scrambling code for compressed mode transmission in a base station device having a spreader for spreading an input data sequence with one of a plurality of OVSF codes and a scrambler for scrambling the spread data sequence with a primary scrambling code used as a default or one of a plurality of secondary scrambling codes according to the number of mobile stations in communication, a first feedback linear shift register generates an m-sequence from first predetermined initial bits, a second feedback linear shift register generates another m-sequence from second predetermined initial bits, a first adder generates the current scrambling code by adding the outputs of the first and second linear feedback shift registers, a second adder adds the output of the second linear feedback register and an m-sequence one bit delayed from the output of the first linear feedback register, and a third adder adds the output of the second linear feedback register and an m-sequence two bits delayed from the output of the first linear feedback register. Here, the compressed mode scrambling code is one of the outputs of the second and third adders and provided to the scrambler to scramble the spread data sequence.